

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An operator assisting apparatus for assisting an operator of an electric-component supply device including a plurality of component feeders and a feeder support on which the component feeders are mounted at respective feeder-mounting positions, each of said component feeders accommodating a plurality of electric components of a specific kind and being arranged to successively supply the electric components one after another, the electric-component supply device being arranged to supply from the component feeders, the electric components to an electric-component mounting device which is arranged to mount the electric components on at least one printed wiring board, said operator assisting apparatus being arranged to assist the operator in performing at least one manual working operation selected from ~~among the group consisting of~~ (i) an operation to mount each one of the component feeders on said feeder support, (ii) an operation to remove said each one of the component feeders from said feeder support, and (iii) an intermediate operation to be performed in connection with said each one of the component feeders, during a time period between moments of the respective operations to mount and remove the said each component-feeders feeder on and from the feeder support, said operator assisting apparatus comprising:

next-operation determining means for determining, based on an operating state of at least one of the electric component supply device and the electric component mounting device, the manual working operation which should be performed next by the operator, and the component feeder for which the determined manual working operation should be performed next, the determined manual working operation being one of the operation to mount the determined component feeder on the feeder support, the operation to remove the determined component feeder from said feeder support, and the intermediate operation in connection with the determined component feeder;

at least one of (a) a position indicator operable to indicate at least one of (i) the feeder-mounting position at which a corresponding one of the determined component-feeders feeder is to be mounted next on said feeder support and (ii) the feeder-mounting position at which a corresponding one of the determined component-feeders feeder has been removed last from said feeder support, and (b) a feeder indicator operable to indicate at least one of (i) the determined component feeder which has been mounted last on said feeder support, (ii) the determined component feeder which is to be removed next from said feeder support and (iii) the determined component feeder on which said intermediate operation is required to be

performed.

2. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, which comprises said position indicator, to assist the operator in performing said operation to mount the determined component ~~feeders~~ feeder on said feeder support.

3. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, further comprising a mounting-position checking and indicating device for effecting a determination as to whether the component feeder mounted last on said feeder support has been mounted at a correct one of said feeder-mounting positions, and for indicating in a human recognizable manner a result of said determination.

4. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 3, which comprises said feeder indicator, and wherein said mounting-position checking and indicating device utilizes said feeder indicator, to indicate said result of said determination.

5. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 4, wherein said mounting-position checking and indicating device is operable to control said feeder indicator to be operable in a ~~first~~ last-mounting manner upon a ~~first~~ last-mounting determination that said component feeder mounted last on said feeder support has been mounted at said correct feeder-mounting position, and in a ~~second~~ non-last-mounting manner different from said ~~first~~ last-mounting manner, upon a ~~second~~ non-last-mounting determination that the component feeder mounted last on said feeder support has not been mounted at said correct feeder-mounting position.

6. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, which comprises said feeder indicator, to assist the operator in performing said operation to remove the determined component ~~feeders~~ feeder from said feeder support.

7. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, which comprises said position indicator, and further comprises a removing-position checking and indicating device operable to control said position indicator to be operable in a ~~third-mode~~ removing manner upon a ~~third~~ removing determination that said component feeder removed last from said feeder support has been removed from a correct one of said feeder-mounting positions, and in a ~~fourth-mode~~ non-removing manner different from said ~~third-mode~~ removing manner, upon a ~~fourth~~ non-removing determination that the component feeder removed last from said feeder support has not been removed from said correct feeder-mounting position.

8. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, which comprises said feeder indicator, to assist the operator in performing said intermediate operation in connection with the determined component feeder.

9. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, which comprises said feeder indicator, and further comprises:

a need detecting device operable to detect a need of performing said intermediate operation;

an operation detecting device operable to detect that said intermediate operation has been performed in connection with any one of said component feeders; and

an intermediate-operation checking and indicating device operable according to an output of said need detecting device, to control said feeder indicator for indicating the component feeder in connection with which said intermediate operation has been performed, such that said feeder indicator is operable ~~in a fifth mode~~ an intermediate manner upon a fifth ~~an intermediate~~ determination that said intermediate operation has been performed at a correct one of said feeder-mounting positions, and in ~~a sixth mode~~ non-intermediate manner different from said ~~fifth mode~~ intermediate manner, upon a ~~sixth~~ non-intermediate determination that said intermediate operation has not been performed at said correct feeder-mounting position.

10. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, which comprises said feeder indicator, and further comprises:

a need detecting device operable to detect a need of performing said intermediate operation;

an operation detecting device operable to detect that said intermediate operation has been performed in connection with any one of said component feeders; and

an intermediate-operation checking and indicating device operable according to an output of said need detecting device, to control said feeder indicator to be operable in a ~~seventh mode~~ needing manner upon a seventh ~~needing~~ determination that the intermediate operation which has been performed ~~has been performed~~ is said intermediate operation the need of which has been detected by said need detecting device, and in ~~an eighth mode~~ a non-needing manner different from said ~~seventh mode~~ needing manner, upon an ~~eighth~~ non-needing determination that the intermediate operation which has been performed is different from said intermediate operation the need of which has been detected by said need detecting device.

11. (Cancelled)

12. (Currently Amended) ~~An~~ The operator assisting apparatus according to claim-
~~11~~ 1, wherein said next-operation determining means includes need detecting means for
detecting a need of performing at least one of said operation to mount any one of said
component feeders at the corresponding feeder-mounting position, said operation to remove
any one of said component feeders mounted at the corresponding feeder-mounting position,
and said intermediate operation in connection with any one of said component feeders.

13. (Currently Amended) ~~An~~ The operator assisting apparatus according to claim-
~~11~~ 1, wherein said plurality of component feeders are provided with respective sets of feeder-
identification data identifying the component feeders, respectively, and said next-operation
determining means includes:

feeder-identification-data obtaining means for obtaining said sets of feeder-
identification data of said component feeders; and

operation-data storing means for storing operation data indicative of the
manual working operation to be performed by the operator in connection with the component
feeder whose set of feeder-identification data has been obtained by said feeder-identification-
data obtaining means,

and wherein said next-operation determining means determines the manual
working operation represented by said operation data stored in said operation-data storing
means, as said manual working operation which should be performed next in connection with
the component feeder whose set of feeder-identification data has been obtained by said
feeder-identification-data obtaining means.

14. (Currently Amended) ~~An~~ The operator assisting apparatus according to claim-
~~11~~ 1, wherein said feeder support is provided with sets of position-identification data
representative of said plurality of feeder-mounting positions, respectively, and said next-
operation determining means includes:

position-identification-data obtaining means for obtaining said sets of
position-identification data of said feeder-mounting positions; and

operation-data storing means for storing operation data indicative of the
manual working operation to be performed by the operator at the feeder-mounting position
represented by the set of position-identification data obtained by said position-identification-
data obtaining means,

and wherein said next-operation determining means determines the manual
working operation represented by said operation data stored in said operation-data storing
means, as said manual working operation which should be performed next at the feeder-

mounting position represented by the set of position-identification data obtained by said position-identification-data obtaining means.

15. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 1, wherein at least one of said position indicator and said feeder indicator includes an optical indicator for indicating the feeder-mounting position or the component feeder, by generation of a light.

16. (Currently Amended) ~~An~~The operator assisting apparatus according to claim 15, wherein said optical indicator includes at least one of an irradiating device operable to irradiate an object with a the light, and a light-emitting device disposed on an object and operable to emit a the light.

17. (New) The operator assisting apparatus according to claim 1, which comprises the position indicator operable to indicate the feeder-mounting position at which said determined component feeder is to be mounted next on the feeder support,
wherein the feeder support is provided with sets of position-identification data representative of the plurality of feeder-mounting positions, respectively, and the plurality of component feeders are provided with respective sets of feeder-identification data identifying the component feeders, respectively,

the operator assisting apparatus further comprises:

position-identification data obtaining means for obtaining the set of position-identification data representing the feeder-mounting position at which said determined component feeder is to be mounted next on the feeder support, so that the position indicator indicates the feeder-mounting position represented by the set of position-identification data obtained by the position identification data obtaining means;

a feeder-identification-data obtaining device which obtains the set of feeder-identification data of one of the component feeders that is selected by the operator;
and

judging means for judging whether the obtained set of feeder-identification data matches the obtained set of position-identification data,

wherein when the judging means judges that the obtained set of feeder-identification data matches the obtained set of position-identification data, the position indicator indicates, in a next-mounting manner, the feeder-mounting position at which said determined component feeder is to be mounted next on the feeder support, and when the judging means judges that the obtained set of feeder-identification data does not match the obtained set of position-identification data, the position indicator indicates, in a non-next-

mounting manner different from the next-mounting manner, the feeder-mounting position at which said determined component feeder is to be mounted next on the feeder support.

18. (New) The operator assisting apparatus according to claim 1, wherein said at least one of the position indicator and the feeder indicator indicates a corresponding one of the determined feeder-mounting position and the determined component feeder, to the operator in a human recognizable manner.